

IN THE CLAIMS

The following is responsive to the Patent Office Action mailed September 23, 2004.

Please cancel claims 13 to 22 and substitute the following claims:

Claims 1-22 (Cancelled)

23. (New) An atomizer for the series coating of workpieces, comprising:

a bell dish having a generally conical outer surface and a longitudinal rotational axis; and

a steering gas ring adjacent to and opposite said generally conical outer surface of said bell dish, including a first plurality of equally circumferentially spaced inner gas shaping holes defined around a first circle directing shaping gas against said generally conical outer surface of said bell dish during application of paint by said atomizer, and a second plurality of equally circumferentially spaced outer gas shaping holes defined around a second circle having a radius greater than said first circle during application of paint by said atomizer to generate a narrower paint spray pattern than a paint spray pattern generally by directing shaping gas through said first plurality of equally circumferentially spaced inner gas shaping holes.

24. (New) The atomizer as defined in claim 23, wherein said first and second plurality of equally circumferentially spaced inner and outer gas shaping holes are coaxially aligned with said longitudinal rotational axis of said bell dish.

25. (New) The atomizer as defined in claim 23, wherein said first plurality of equally circumferentially spaced inner gas shaping holes extend parallel to said longitudinal rotational axis of said bell dish.

26. (New) The atomizer as defined in claim 23, wherein each of said first and second plurality of equally circumferentially spaced inner and outer gas shaping holes are independently connected to a source of gas under pressure to independently control the flow

of gas through said first and second plurality of equally circumferentially spaced inner and outer gas shaping holes to independently achieve different paint spray patterns.

27. (New) The atomizer as defined in claim 23, wherein said first and second plurality of equally circumferentially spaced inner and outer gas shaping holes are cylindrical.

28. (New) The atomizer as defined in claim 23, wherein said second circle has a radius less than a radius of said generally conical outer surface of said bell dish directing shaping gas against said generally conical outer surface of said bell dish.

29. (New) An atomizer for the series coating of workpieces, comprising:
a bell dish having a generally conical outer surface and a longitudinal rotational axis; and

a steering gas shaping ring adjacent to and opposite said generally conical outer surface of said bell dish, including a first plurality of circumferentially spaced inner gas shaping holes defined around a first circle directing shaping gas against said generally conical outer surface of said bell dish during application of paint by said atomizer, and a second plurality of equally spaced outer gas shaping holes defined around a second circle having a radius greater than said first circle but less than a radius of said conical outer surface of said bell dish directing shaping gas against said conical outer surface of said bell dish at a radius greater than a radius of said first plurality of circumferentially spaced inner gas shaping holes during application of paint by said atomizer to generate a narrower paint spray pattern than a paint spray pattern generated by directing shaping gas through said first plurality of circumferentially spaced inner gas shaping holes and said first and second plurality of circumferentially spaced inner and outer gas shaping holes connected to a source of gas under pressure having a control permitting independent direction of shaping gas

through either of said first and second circumferentially spaced inner and outer gas shaping holes.

30. (New) The atomizer as defined in claim 29, wherein said first and second circumferentially spaced inner and outer gas shaping holes are equally circumferentially spaced.

31. (New) The atomizer as defined in claim 29, wherein said first and second plurality of circumferentially spaced inner and outer gas shaping holes are coaxially aligned with said longitudinal rotational axis of said bell dish.

32. (New) The atomizer as defined in claim 29, wherein said first and second plurality of circumferentially spaced inner and outer gas shaping holes are cylindrical.

33. (New) A method of series coating of workpieces, comprising the following steps:

positioning a bell dish having a generally conical outer surface and a longitudinal axis in a rotary atomizer;

locating a gas shaping ring opposite said generally conical outer surface of said bell dish including a plurality of circumferentially spaced inner gas shaping holes and a second plurality of circumferentially spaced outer gas shaping holes surrounding said first plurality of circumferentially spaced inner gas shaping holes;

directing paint under pressure against said bell dish to apply paint to a substrate and simultaneously directing shaping gas through said first plurality of circumferentially spaced inner gas shaping holes to generate a first paint spray pattern; and

directing paint under pressure against said bell dish and simultaneously directing shaping gas through said second plurality of circumferentially spaced outer gas shaping holes to generate a second paint spray pattern different from said first spray pattern.

34. (New) The method as defined in claim 33, wherein said method includes directing shaping gas through said second plurality of circumferentially spaced outer gas shaping holes to generate a narrower paint spray pattern than a paint spray pattern generated by directing shaping gas through said first plurality of circumferentially spaced inner gas shaping holes.

35. (New) The method as defined in claim 33, wherein said method includes directing shaping gas under pressure through only said first plurality of circumferentially spaced inner gas shaping holes, then discontinuing directing gas through said first plurality of circumferentially spaced inner gas shaping holes and then directing shaping gas through said second plurality of circumferentially spaced outer gas shaping holes to generate a different paint spray pattern.